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(54) MAGNETIC FIELD GENERATING DEVICE

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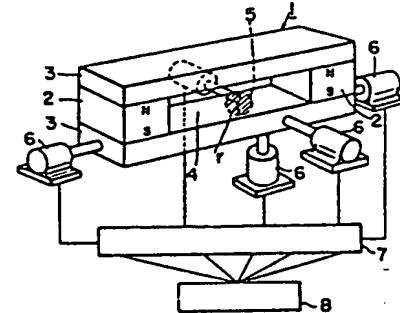
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PURPOSE: To obtain a tomographic image of a necessary object of diagnosis through a relatively small-sized gap by detecting relative positions of a target in the three-axial coordinate system of the object of diagnosis and the three-axial coordinate system of a moving means in a magnetostatic field, and making a uniform magnetic field coincident.

CONSTITUTION: A magnetic circuit 1 has a couple of plate type magnetic pole pieces 3 whose main surface face each other at a constant interval, columnar permanent magnets 2 are connected between both end facing parts of the magnetic pole pieces 3 to form the gap 4 between the magnetic pole pieces 4, and pieces of magnetic flux produced by the magnets 2 are equalized in direction and form magnetic fields through the magnetic pole pieces 3, thereby forming a uniform magnetostatic field part 5 which is intense within a sphere having a radius (r) and has extremely high uniformity in the gap 4 as center. The whole of the circuit 1 is moved by a linear motor 6 in three axial directions. The object of diagnosis mounted on a rack which is movable in the three axial directions is sent in the three-axial coordinate system of this moving device and the magnetostatic field part 6 is moved to the necessary target; and the position of the magnetostatic field part 5 is measured 7 by arithmetic on the basis of input electric power to the motor 6, which is controlled 8 according to the measurement result to make the object coincide with target coordinates.

DOC



8: controller

Von Miller